

Reports of *Agathidium* from Darjeeling:
expedition 1978
of Geneva Natural History Museum
(*Coleoptera, Leiodidae*)

by

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With 45 figures

ABSTRACT

Descriptive and/or collecting data are presented on 21 species of *Agathidium*, on the basis of 1148 specimens collected in Darjeeling (India) by Dr. C. Besuchet and Dr. I. Löbl (expedition 4.X.-19.X.1978). New descriptions: *A. anophthalmicum* n. sp., *A. indra* n. sp., *A. khasicum* n. sp., *A. varuna* n. sp., *A. sevokense* n. sp.; redescription: *A. harmandi* Port.; new records from Darjeeling: *A. breve* Ang. & Dmz., *A. harmandi* Port., *A. laticorne* Port. Spermatheca of *A. breve* Ang. & Dmz., *A. abominabile* Ang. & Dmz. and *A. transversum* Ang. & Dmz. is figured. The first eyeless species is described.

The present paper deals with a large amount, 1148 specimens, 21 species, of *Agathidium* from Darjeeling (India) collected by Dr. C. Besuchet and Dr. I. Löbl (expedition 4.X.-19.X.1978).

This material includes:

- a) 5 new species, described here;
- b) 3 new species described in other papers of ours contemporaneously in print (*A. sikkimense* n. sp. in *Entomol. basiliensia*; *A. martensi* n. sp. and *A. pseudoparia* n. sp. in *Senckenberg. biol.*);
- c) 11 specimens of *A. harmandi* Port., of which only the holotype was known, redescribed here;

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d) 3 new records from Darjeeling;

e) female specimens of *A. breve* Ang. & Dmz., *A. abominabile* Ang. & Dmz. and *A. transversum* Ang. & Dmz., of which only males were known hitherto.

Particularly noticeable is the discovery of an eyeless species, *A. anophthalmicum* n. sp.

We wish to express congratulations and thanks to Dr. C. Besuchet and Dr. I. Löbl for the very interesting material they have collected.

The specimens are deposited in Geneva Museum (GM) and Angelini collection (AC).

***Agathidium* (s. str.) *singmaricum* Ang. & Dmz.**

Agathidium (s. str.) *singmaricum* Angelini & De Marzo 1981, *Entomol. Basiliensia* 6: 256.

Agathidium (s. str.) *singmaricum*: ANGELINI & DE MARZO 1983a, *Senckenberg. biol.* 64: 171.

Agathidium (s. str.) *singmaricum*: ANGELINI & DE MARZO, 1984, *Annls. Hist. nat. Mus. natn. hung.*, 76 in press.

Material: INDIA, Darjeeling, between Ghoom and Lopchu, 13 km from Ghoom, northern versant, 2000 m, 12.X.1978, 16 specimens in GM and AC; same collecting data, 14.X.1978, 33 specimens in GM and AC; Darjeeling, Ghoom, Tigerhill, southern versant, 2200-2300 m, 13.X.1978, 14 specimens in GM and AC; Darjeeling, road to Bijanbari, 13 km north from Ghoom, 1500 m, 15.X.1978, 4 specimens in GM and AC; Darjeeling, Tonglu, 3100 m, 16.X.1978, 9 specimens in GM and AC; same collecting data, 2700 m, 12 specimens in GM; Darjeeling, Tigerhill, 2500-2600 m, 18.X.1978, 21 specimens in GM and AC.

Distribution: Nepal, India (Darjeeling and Meghalaya).

***Agathidium* (s. str.) *quaterfoveatum* Ang. & Dmz.**

Agathidium (s. str.) *quaterfoveatum* Angelini & De Marzo 1981, *Entomol. Basiliensia* 6: 263.

Agathidium (s. str.) *quaterfoveatum*: ANGELINI & DE MARZO 1983b, *Entomol. Basiliensia* 8: 153.

Material: INDIA, Darjeeling, Algarah, 1800 m, 9.X.1978, 2 specimens in GM and AC.

Distribution: India (Darjeeling).

***Agathidium* (s. str.) *breve* Ang. & Dmz.**

Fig. 32

Agathidium (s. str.) *breve* Angelini & De Marzo 1981, *Entomol. Basiliensia* 6: 262.

Material: INDIA, Darjeeling, Tonglu, 3100 m, 16.X.1978, 14 specimens in GM and AC; same collecting data, 2700 m, 13 specimens in GM and AC.

Remarks: The new material includes some females of this species, of which only 2 males were known. Tarsal formula ♀: 5-4-4. Spermatheca (fig. 32): basal part sub-spherical, apical part slender and twisted.

Distribution: Nepal, India (Darjeeling). New record from Darjeeling.

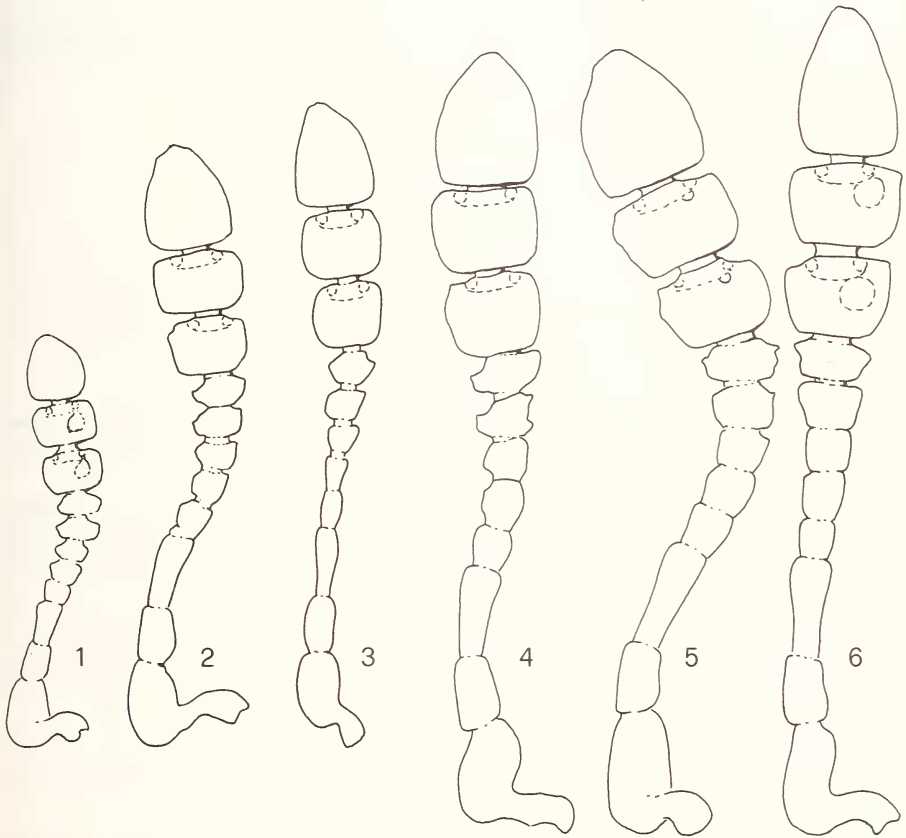
Agathidium (*s. str.*) *brancuccii* Ang. & Dmz.

Agathidium (*s. str.*) *brancuccii* Angelini & De Marzo 1981, *Entomol. Basiliensia* 6: 269.

Agathidium (*s. str.*) *brancuccii*: ANGELINI & DE MARZO 1983b, *Entomol. Basiliensia* 8: 153.

Material: INDIA, Darjeeling, Algarah, 1800 m, 9.X.1978, 139 specimens in GM and AC; Darjeeling, between Ghoom and Lopchu, 13 Km from Ghoom, northern versant, 2000 m, 12.X.1978, 9 specimens in GM and AC; same collecting data, 14.X.1978, 39 specimens in GM and AC; Darjeeling, Ghoom, Tigerhill, southern versant, 2200-2300 m, 13.X.1978, 21 specimens in GM and AC; Darjeeling, road to Bijanbari, 13 km north from Ghoom, 1500 m, 15.X.1978, 10 specimens in GM and AC; Darjeeling, Tigerhill, 2500-2600 m, 18.X.1978, 34 specimens in GM and AC.

Distribution: Nepal, India (Darjeeling and Sikkim).



FIGS 1-6.

Antenna of: 1, *A. anophthalmicum* n. sp.; 2, *A. indra* n. sp.; 3, *A. harmandi* Port.;
4, *A. khasicum* n. sp.; 5, *A. varuna* n. sp.; 6, *A. sevokense* n. sp.

Agathidium (*s. str.*) *abominabile* Ang. & Dmz.

Fig. 33

Agathidium (*s. str.*) *abominabile* Angelini & De Marzo 1981, *Entomol. Basiliensia* 6: 288.

Material: INDIA, Darjeeling, Ghoom, Tigerhill, southern versant, 2200-2300 m, 13.X.1978, 2 specimens in GM; Darjeeling, Tonglu, 3100 m, 16.X.1978, 4 specimens in GM and AC; same collecting data, 2700 m, 10 specimens in GM and AC; Darjeeling, Tigerhill, 2500-2600 m, 2 specimens in GM.

Remarks: The new material includes some females of this species, of which only the holotype ♂ was known. Tarsal formula ♀: 4-4-4. Spermatheca (fig. 33): basal part fat, apical part slender and twisted. The left mandible of some males bears a small horn (absent in the holotype), as in males of another Himalayan species, *A. shermathangense* Ang. & Dmz. It is noticeable that the presence of horn on the left mandible was regarded as exclusive feature of *Neoceble* and *Cyphocele*. The four specimens of Tonglu (3100 m) show parameres differently shaped at apex with respect to the other specimens known hitherto, including those from Tonglu, 2700 m: the attribution of them to a new species has to be weighed. Length range: 2,4-2,7 mm.

Distribution: India (Darjeeling).

Agathidium (*s. str.*) *anophthalmicum* n. sp.

Figs 1, 7, 8, 14, 20, 26, 27, 34

Length 1,35-1,55 mm (holotype ♂: 1,55 mm). Dorsum uniformly reddish-brown, venter paler; antennae and legs testaceous. Microreticulation absent (in scarcely sclerotized specimens, traces of microreticulation are present on elytra). Whole dorsum with very small and sparse punctures. Eyeless species.

Head: Punctures very small and sparse, spaced from each other by 1-10 times their own diameter. Clypeal line absent. Eyes absent (fig. 7). 3rd antennal segment 1.2 times as long as the 2nd and as long as 4th + 5th (fig. 1); Hamann's organ: gutter with one big vesicle in both 9th and 10th antennal segments.

Pronotum: Puncturation as on head. 1,2 times as broad as head, not much broader than long ($W/L = 1,4$) and moderately convex ($W/H = 1,54$). Anterior margin scarcely bent (fig. 8). Lateral outline much broadly rounded (fig. 14). Holotype: length 0,46 mm, width 0,65 mm, height 0,42 mm.

Elytra: Traces of microreticulation only in scarcely sclerotized specimens; puncturation as on head. As broad as pronotum, nearly as broad as long ($W/L = 0,95$) and moderately convex ($W/H = 1,54$). Lateral outline with slight humeral angle. Sutural striae absent. Holotype: length 0,68 mm, width 0,65 mm, height 0,42 mm.

Metathoracic wings absent. Meso and metasternum: median carina present, lateral lines absent, metasternum very shortened (meso and metacoxae in touch).

Legs: Male hind femora simple (fig. 20); male hind tibiae expanded (fig. 20). Tarsal formula: ♂ 4-4-4, ♀ 4-4-4.

Male copulatory organ (figs 26-27): Aedeagus slender, with hook-like proximal part, lateral margins gently approached into a small rounded tip; ventral piece bifid. Parameres slender, abruptly tapered at apex.

Spermatheca (fig. 34): basal part subspherical, with small production towards the duct connection; apical part slender.

Discussion: *A. anophthalmicum* n. sp. is easily separable from the other Himalayan species which bear very shortened metasternum by lack of eyes; further differences regard the width ratio pronotum/head and the tarsal formula in males. It is the smallest species of Anisotomini which we know hitherto.

Types: INDIA, Darjeeling, between Ghoom and Lopchu, 13 km from Ghoom, northern versant, 2000 m, 12.X.1978, Besuchet & Löbl, holotype 1 ♂ N.1172, 1 ♂ and 7 ♀ paratypes N.3416-3421, 1262, 1263 in GM, 1 ♂ and 3 ♀ paratypes N. 1173, 1260, 1261, 3422 in AC; same collecting data, 14.X.1978, 2 ♂ and 5 ♀ paratypes N.3423-3429 in GM, 1 ♂ and 2 ♀ paratypes N.3430-3432 in AC.

Distribution: India (Darjeeling).

Agathidium (*s. str.*) *indra* n. sp.

Figs 2, 9, 15, 21, 28, 29, 35

Length 1,95-2,05 mm (holotype ♂: 1,95 mm). Dorsum uniformly reddish-brown; venter paler; antennae and legs testaceous. Microreticulation absent. Whole dorsum sparsely punctate. Head widest a little behind the eyes.

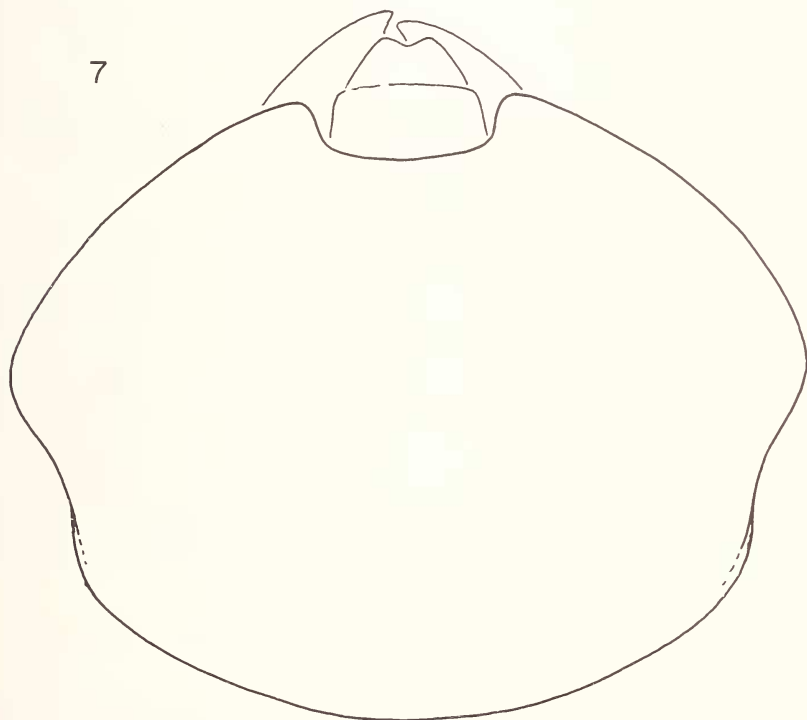
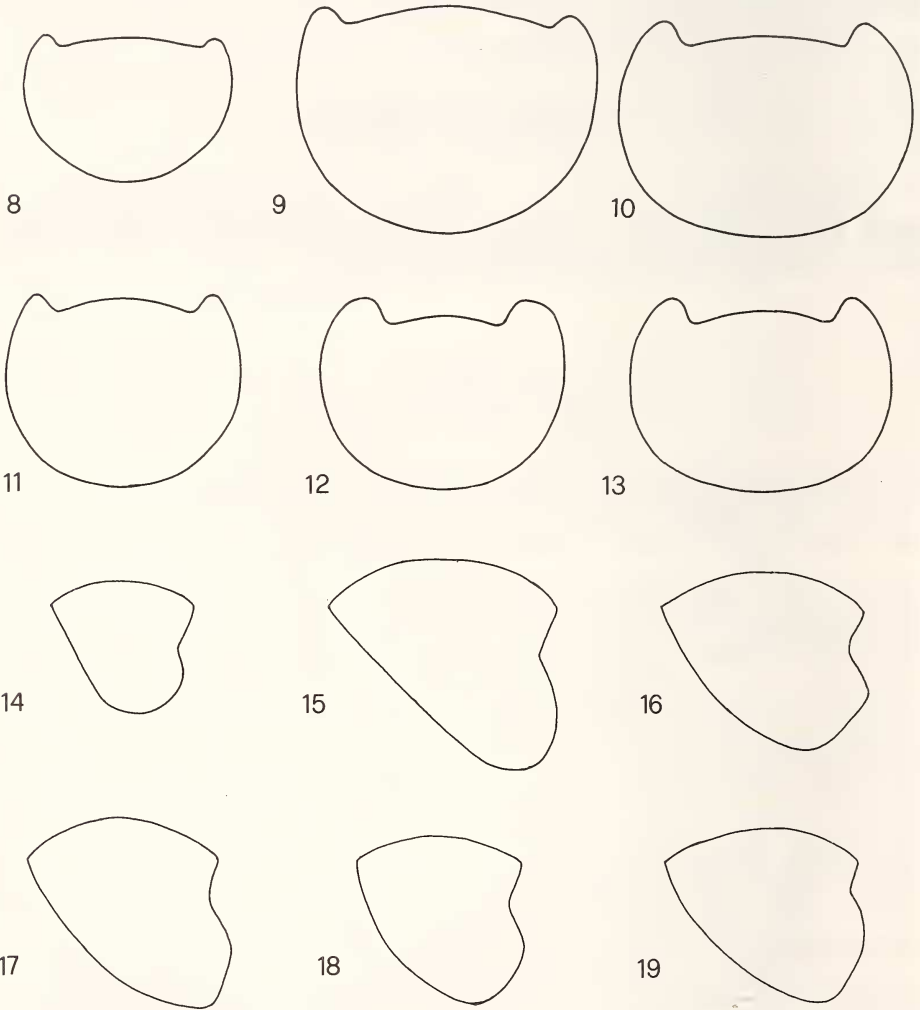


FIG. 7.

Head of *A. anophthalmicum* n. sp.

Head: Puncturation very sparse: punctures small and scarcely impressed, spaced from each other by 4-6 times their own diameter. Clypeal line absent. Temporal angle present. 3rd antennal segment 1,3 times as long as the 2nd and as long as 4th + 5th (fig. 2); Hamann's organ: gutter without vesicles in both 9th and 10th antennal segments.

Pronotum: Punctures smaller and sparser than on head, spaced from each other by 4-8 times their own diameter. 1,3 times as broad as head, scarcely broader than long



FIGS. 8-19.

Dorsal and lateral outline of pronotum in: 8, *A. anophthalmicum* n. sp.; 9, *A. indra* n. sp.; 10, *A. harmandi* Port.; 11, *A. khasicum* n. sp.; 12, *A. sevokense* n. sp.; 13, *A. varuna* n. sp.; 14, *A. anophthalmicum* n. sp.; 15, *A. indra* n. sp.; 16, *A. harmandi* Port.; 17, *A. khasicum* n. sp.; 18, *A. varuna* n. sp.; 19, *A. sevokense* n. sp.

(W/L = 1,36) and very much convex (W/H = 1,49). Anterior margin scarcely bent (fig. 9). Lateral outline nearly angulate (fig. 15). Holotype: length 0,73 mm, width 1,00 mm, height 0,67 mm.

Elytra: Punctate as pronotum. A little less broad than pronotum, nearly as broad as long (W/L = 1,14) and very much convex (W/H = 1,5). Lateral outline with slight humeral angle. Sutural striae absent. Holotype: length 0,83 mm, width 0,95 mm, height 0,63 mm.

Metathoracic wings absent. Meso and metasternum: median carina clear, lateral lines absent, femoral lines incomplete.

Legs: Male hind femora simple (fig. 21); male hind tibiae expanded (fig. 21). Tarsal formula: ♂ 4-4-4, ♀ 4-4-4.

Male copulatory organ (figs 28-29): Aedeagus slender with hook-like proximal part, lateral margins abruptly convergent into a rounded tip; ventral piece not deeply bifid. Parameres slender, gently tapered towards apex.

Spermatheca (fig. 35): Basal part pear-shaped; apical part slender.

Discussion: *A. indra* n. sp. is close to *A. wittmeri* Ang. & Dmz. by habitus, lateral outline of pronotum, characters of meso and metasternum, tarsal formula of both sexes. It differs from the latter in smaller size, elytral puncturation and, resolutely, by aedeagus shape.

Types: INDIA, Darjeeling, 13 km north from Ghoom, road to Bijanbari, 1500 m, 15.X.1978, Besuchet and Löbl, holotype ♂ N. 3446 and 3 ♂ paratypes N.3447-3449 in GM, 1 ♂ and 1 ♀ paratypes N. 3450-3451 in AC; Darjeeling, between Ghoom and Lopchu, 13 km from Ghoom, northern versant, 2000 m, 14.X.1978, Besuchet and Löbl, 2 ♀ paratypes N.3452-3453 in GM.

Distribution: India (Darjeeling).

Agathidium (*s. str.*) *sikkimense* Ang. & Dmz.

Agathidium (*s. str.*) *sikkimense* Angelini & De Marzo 1983 b, *Entomol. Basiliensia* 8: 154.

Material: INDIA, Darjeeling, Algarah, 1800 m, 9.X.1978, 11 ♂ and 7 ♀ (paratypes N.3454-3471) in GM, 3 ♂ and 3 ♀ (paratypes N.3472-3477) in AC; Darjeeling, between Algarah and Labha, 7 km from Algarah, southern versant, 1900 m, 11.X.1978, 1 ♂ and 1 ♀ (paratypes N. 3478, 3479) in GM, 1 ♂ and 1 ♀ (paratypes N. 3480, 3481) in AC.

Remarks: This material has been added to that collected by researchers of Basel Museum in order to describe the new species.

Distribution: India (Darjeeling and Sikkim).

Agathidium (*s. str.*) *pusillum* Ang. & Dmz.

Agathidium (*s. str.*) *pusillum* Angelini & De Marzo 1981, *Entomol. Basiliensia*, 6: 217.

Material: INDIA, Darjeeling, Ghoom, Tigerhill, south versant, 2200-2300 m, 13.X.1978, 5 specimens in GM and AC.

Distribution: India (Darjeeling).

***Agathidium (s. str.) fallax* Ang. & Dmz.**

Agathidium (s. str.) fallax Angelini & De Marzo 1981, *Entomol. Basiliensia* 6: 241.
Agathidium (s. str.) fallax: ANGELINI & DE MARZO 1983a, *Senckenberg. biol.*, 64: 167.
Agathidinm (s. str.) fallax: ANGELINI & DE MARZO, 1984, *Annl. Hist. nat. Mus. natn. Hung.*, 76 in press.

Material: INDIA, Darjeeling, between Ghoom and Lopchu, northern versant, 13 km from Ghoom, 2000 m, 12.X.1978, 13 specimens in GM and AC; same collecting data, 14.X.1978, 22 specimens in GM and AC; Darjeeling, Ghoom, Tigerhill, southern versant, 2200-2300 m, 13.X.1978, 20 specimens in GM and AC; Darjeeling, Tonglu, 3100 m, 16.X.1978, 19 specimens in GM and AC; same collecting data, 2700 m, 9 specimens in GM and AC; Darjeeling, Tigerhill, 2500-2600 m, 18.X.1978, 25 specimens in GM and AC.

Distribution: Nepal, India (Darjeeling).

***Agathidium (s. str.) indicum* Ang. & Dmz.**

Agathidium (s. str.) indicum Angelini & De Marzo 1981, *Entomol. Basiliensia* 6: 247.
Agathidium (s. str.) indicum: ANGELINI & DE MARZO 1983a, *Senckenberg. biol.*, 64: 168.

Material: INDIA, Darjeeling, Ghoom, Tigerhill, 2200-2300 m, 13.X.1978, 54 specimens in GM and AC; Darjeeling, between Ghoom and Lopchu, 13 km from Ghoom, 2000 m, 14.X.1978, 16 specimens in GM and AC; Darjeeling, Tonglu, 3100 m, 16.X.1978, 2 specimens in GM; same collecting data, 2700 m, 5 specimens in GM and AC; Darjeeling, Tigerhill, 2500-2600 m, 18.X.1978, 25 specimens in GM and AC.

Remarks: The new material allows to notice the wide variability of the elytral microreticulation in *A. indicum*: while some females are smooth as males, some others are more or less strongly microreticulate on elytra. The variability is very wide indeed: we knew species in which the elytral microreticulation is more impressed in females, but we first meet microreticulate females corresponding to smooth males. The specific identification of the microreticulate females has been based on the examination of spermathecae; moreover, we have considered that no further species with microreticulate elytra and lacking in sutural striae has been collected in the same locality. Females of *A. indicum* with microreticulate elytra may be mistaken for *A. ilamense*, being similar the spermathecae; however, the sides of head and pronotum are smooth in *A. indicum*, but they are distinctly microreticulate in *A. ilamense*.

***Agathidium (s. str.) martensi* Ang. & Dmz.**

Agathidium (s. str.) martensi Angelini & De Marzo 1983a, *Senckenberg. biol.* 64: 170.
Agathidium (s. str.) martensi: ANGELINI & DE MARZO 1983b, *Entomol. Basiliensia* 8: 160.

Material: INDIA, Darjeeling, Tonglu, 3100 m, 16.X.1978, 45 ♂ and 52 ♀ (paratypes) in GM, 11 ♂ and 10 ♀ (paratypes) in AC, 2 ♂ and 3 ♀ (paratypes) in Senckenberg Museum; same collecting data, 2700 m, 22 ♂ and 25 ♀ (paratypes) in GM, 9 ♂ and 9 ♀ (paratypes) in AC.

Remarks: This material has been added to that collected in Nepal by Martens & Ausobsky, in order to describe the new species.

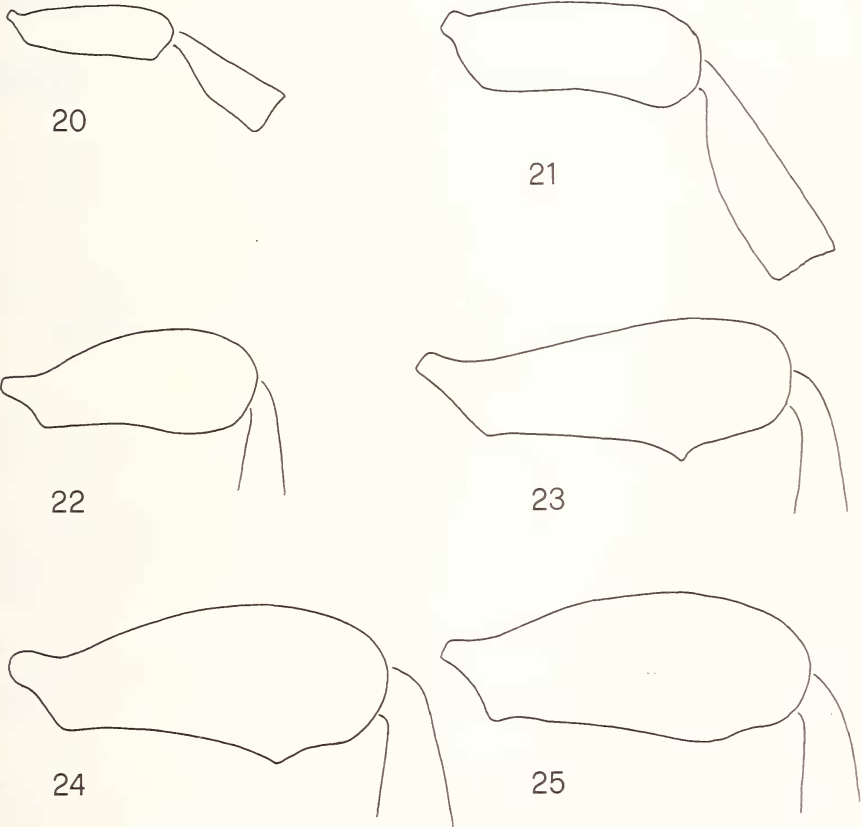
Distribution: Nepal, India (Darjeeling).

Agathidium (*s. str.*) *transversum* Ang. & Dmz.

Fig. 36

Agathidium (*s. str.*) *transversum* Angelini & De Marzo 1981, *Entomol. Basiliensia* 6: 279.

Material: INDIA, Darjeeling, Ghoom, Tigerhill, southern versant, 2200-2300 m, 13.X.1978, 13 specimens in GM and AC; Darjeeling, Tonglu, 3100 m, 16.X.1978, 20 specimens in GM and AC; same collecting data, 2700 m, 2 specimens in GM; Darjeeling, Tigerhill, 2500-2600 m, 18.X.1978, 9 specimens in GM and AC.



FIGS 20-25.

Male hind tibia and/or femur of: 20, *A. anophthalmicum* n. sp.;
 21, *A. indra* n. sp.; 22, *A. harmandi* Port.; 23, *A. khasicum* n. sp.;
 24, *A. varuna* n. sp.; 25, *A. sevokense* n. sp.

Remarks: The new material includes some females of this species, of which only the holotype ♂ was known. Tarsal formula ♀: 4-4-4. Spermatheca (fig. 36): basal part a little fat, with annular narrowing near the duct connection; apical part slender. Length range: 2,0-2,3 mm.

Distribution: India (Darjeeling).

***Agathidium* (*s. str.*) *pseudoparia* Ang. & Dmz.**

Agathidium (*s. str.*) *pseudoparia* Angelini & De Marzo 1983a, *Senckenberg. biol.* 64: 172.

Material: INDIA, Darjeeling, between Ghoom and Lopchu, 13 km from Ghoom, 2000 m, 12.X.1978, 1 ♂ (paratype) in GM; Darjeeling, Ghoom, Tigerhill, 2200-2300 m, 13.X.1978, 5 ♂ and 4 ♀ (paratypes) in GM, 2 ♂ and 1 ♀ (paratypes) in AC; Darjeeling, Tonglu, 3100 m, 16.X.1978, 21 ♂ and 28 ♀ (paratypes) in GM, 6 ♂ and 5 ♀ (paratypes) in AC, 2 ♂ and 3 ♀ (paratypes) in Senckenberg Museum; same collecting data, 2700 m, 1 ♂ and 2 ♀ (paratypes) in GM, 1 ♂ (paratype) in AC; Darjeeling, Tigerhill, 2500-2600 m, 18.X.1978, 11 ♂ and 19 ♀ (paratypes) in GM, 6 ♂ and 6 ♀ (paratypes) in AC.

Remarks: This material has been added to that collected in Nepal by Martens & Ausobsky in order to describe the new species.

Distribution: Nepal, India (Darjeeling).

***Agathidium* (*s. str.*) *harmandi* Port.**

Figs 3, 10, 16, 22, 30, 31, 37

Agathidium (*s. str.*) *harmandi* Portevin 1905, *Bull. Mus. natn. Hist. nat. Paris* 11: 423.

Agathidium (*Cyphocele*) *harmandi*: PORTEVIN 1927, *Encycl. Ent. Col.* I: 8182.

Redescription

Length 2,0-2,3 mm (holotype ♂: 2,0 mm). Head and pronotum uniformly reddish brown; elytra dark reddish-brown or black, paler at sides and along the suture; antennae testaceous with dark club; legs testaceous. Microreticulation absent. Whole dorsum with fine and sparse puncturation.

Head: Punctures very small and superficial, spaced from each other by 4-6 times their own diameter. Clypeal line absent. 3rd antennal segment 1,2 times as long as the 2nd and as long as 4th + 5th (fig. 3); Hamann's organ: gutter without vesicles in both 9th and 10th antennal segments.

Pronotum: Punctures as small and superficial as on head but more sparse, spaced from each other by 2-8 times their own diameter. 1,5 times as broad as head, moderately broader than long ($W/L = 1,45$) and moderately convex ($W/H = 1,71$). Anterior margin scarcely bent (fig. 10). Lateral outline truncate (fig. 16). Holotype: length 0,65 mm, width 0,96 mm, height 0,56 mm.

Elytra: Only few punctures, bigger than on head, superficial. A little broader than pronotum, nearly as broad as long ($W/L = 1,11$) and scarcely convex ($W/H = 1,85$). Lateral outline with slight humeral angle. Sutural striae absent. Holotype: length 0,90 mm, width 1,00 mm, height 0,54 mm.

Metathoracic wings present. Meso and metasternum: median carina clear, lateral lines absent, femoral lines incomplete.

Legs: Male hind femora simple (fig. 22). Tarsal formula: ♂ 5-5-4, ♀ 5-4-4.

Male copulatory organ (figs 30-31): Aedeagus slender, with hook-like proximal part, lateral margins sinuate and approached into a broadly rounded tip; ventral piece not deeply bifid. Parameres slender, gently tapered towards apex.

Spermatheca (fig. 37): Basal part pear-shaped, apical part slender.

Discussion: From the other Himalayan species which lack microreticulation and sutural striae, *A. harmandi* Port. is separable by dark antennal club, presence of metathoracic wings and low ratio 3rd/2nd in antennal segments.

Material: INDIA, Darjeeling, Algarah, 1800 m, 9.X.1978, 3 specimens in GM and AC; Darjeeling, between Ghoom and Lopchu, 13 km from Ghoom, northern versant, 2000 m, 12.X.1978, 4 specimens in GM and AC; same collecting data, 14.X.1978, 4 specimens in GM and AC. The holotype ♂ from Sikkim is deposited in Paris Museum.

Distribution: India (Darjeeling and Sikkim). New record from Darjeeling.

***Agathidium* (*s. str.*) *crassum* Ang. & Dmz.**

Agathidium (*s. str.*) *crassum* Angelini & de Marzo 1981, *Entomol. Basiliensia* 6:280.

Agathidium (*s. str.*) *crassum*: ANGELINI & DE MARZO 1983b, *Entomol. Basiliensia* 8:160.

Material: INDIA, Darjeeling, Algarah, 1800 m, 9.X.1978, 15 specimens in GM and AC; Darjeeling, between Algarah and Labha, 7 Km from Algarah, 1900 m, 11.X.1978, 6 specimens in GM and AC; Darjeeling, between Ghoom and Lopchu, 13 Km from Ghoom, northern versant, 2000 m, 12.X.1978, 3 specimens in GM and AC; same collecting data, 14.X.1978, 11 specimens in GM and AC; Darjeeling, 13 Km north of Ghoom, road to Bijanbari, 1500 m, 15.X.1978, 3 specimens in GM; Darjeeling, Tonglu, northern versant, 2700 m, 16.X.1978, 1 specimen in GM.

Distribution: Nepal, India (Darjeeling).

***Agathidium* (*s. str.*) *khasicum* n. sp.**

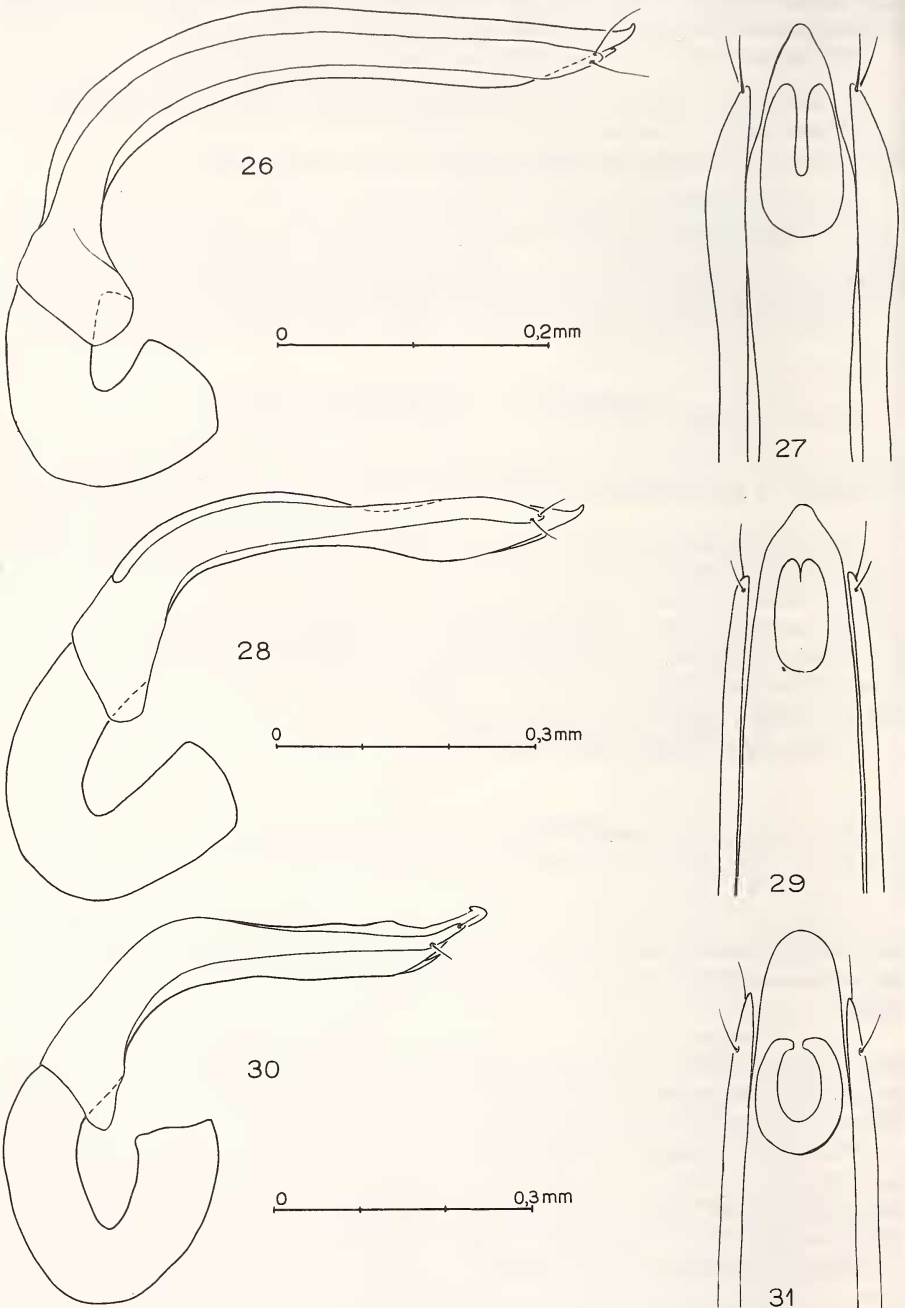
Figs 4, 11, 17, 23, 38, 40, 41

Length 2,7-3,0 mm (holotype ♂: 3,0 mm). Dorsum dark reddish-brown or black with sides reddish-brown; venter dark reddish-brown; antennae testaceous with dark club; legs testaceous. Micro reticulation absent. Whole dorsum with fine and sparse puncturation.

Head: Punctures very small and superficial, spaced from each other by 4-8 times their own diameter. Clypeal line absent. Anterior-lateral margin distinctly rimmed. 3rd antennal segment 1,2 times as long as the 2nd and as long as 4th+5th (fig. 4); Hamann's organ: gutter without vesicles in both 9th and 10th antennal segments.

Pronotum: Punctures as small as on head, spaced from each other by 6-10 times their own diameter. 1,6 times as broad as head, a little broader than long (W/L = 1,25) and very much convex (W/H = 1,25). Anterior margin scarcely bent (fig. 11). Lateral outline nearly angulate (fig. 17). Holotype: length 1,08 mm, width 1,35 mm, height 1,08 mm.

Elytra: Punctures a little bigger and more impressed than on pronotum, spaced from each other by 5-10 times their own diameter. A little broader than pronotum, nearly as broad as long (W/L = 1,12) and scarcely convex (W/H = 1,93). Lateral outline with slight humeral angle. Sutural striae absent. Holotype: length 1,25 mm, width 1,41 mm, height 0,73 mm.



FIGS 26-31.

Male copulatory organ (lateral view and ventral view of apex) of:
 26-27, *A. anophthalmicum* n. sp.; 28-29, *A. indra* n. sp.; 30-31, *A. harmandi* Port.

Metathoracic wings absent. Meso and metasternum: median carina present, lateral lines absent, femoral lines incomplete.

Legs: Male hind femora with slight subdistal tooth on the posterior margin. (fig. 23). Tarsal formula: ♂ 5-5-4, ♀ 5-4-4.

Male copulatory organ (figs 40-41): Aedeagus slender, with S-shaped proximal part, lateral margins rather diverging towards apex and approached into a broadly rounded tip; ventral piece bifid. Parameres slender, gently tapered towards apex.

Spermatheca (fig. 38): Basal part pear-shaped, with a small production towards the duct connection; apical part slender.

Discussion: *A. khasicum* n. sp. is close to *A. meghalayanum* Ang. & Dmz. by colouring of dorsum and antennae, lateral outline of pronotum and punctuation characters. It differs from the latter by ratio 3rd/2nd in antennal segments, shape of male hind femora, absence of lateral lines on mesosternum and pronotum shape.

Types: INDIA, Meghalaya, Khasi hills, Shillong, 1850-1950 m, 30.X.1978, Besuchet and Löbl, holotype ♂ N. 3174 and 1 ♂ paratype N. 3175 in GM, 1 ♂ and 1 ♀ paratypes N.3176-3177 in AC; Meghalaya, Khasi hills, Mawphlang, 1800 m, 28.X.1978, Besuchet and Löbl, 1 ♂ and 1 ♀ paratypes N. 3178-1379 in GM; Darjeeling, between Ghoom and Lopchu, 13 km from Ghoom, northern versant, 2000 m, 12.X.1978, Besuchet and Löbl, 1 ♂ and 4 ♀ paratypes N. 3434-3438 in GM, 1 ♂ and 2 ♀ paratypes N. 3439-3441 in AC; same collecting data, 14.X.1978, Besuchet and Löbl, 1 ♂ and 1 ♀ paratypes N. 3442-3443 in GM.

Distribution: India (Darjeeling and Meghalaya).

Agathidium (*s. str.*) *varuna* n. sp.

Figs 5, 13, 18, 24, 42, 43

Length 2,75 mm (holotype ♂). Dorsum uniformly reddish-brown, venter paler; antennae testaceous with dark club, legs testaceous. Microreticulation absent. Whole dorsum clearly punctate.

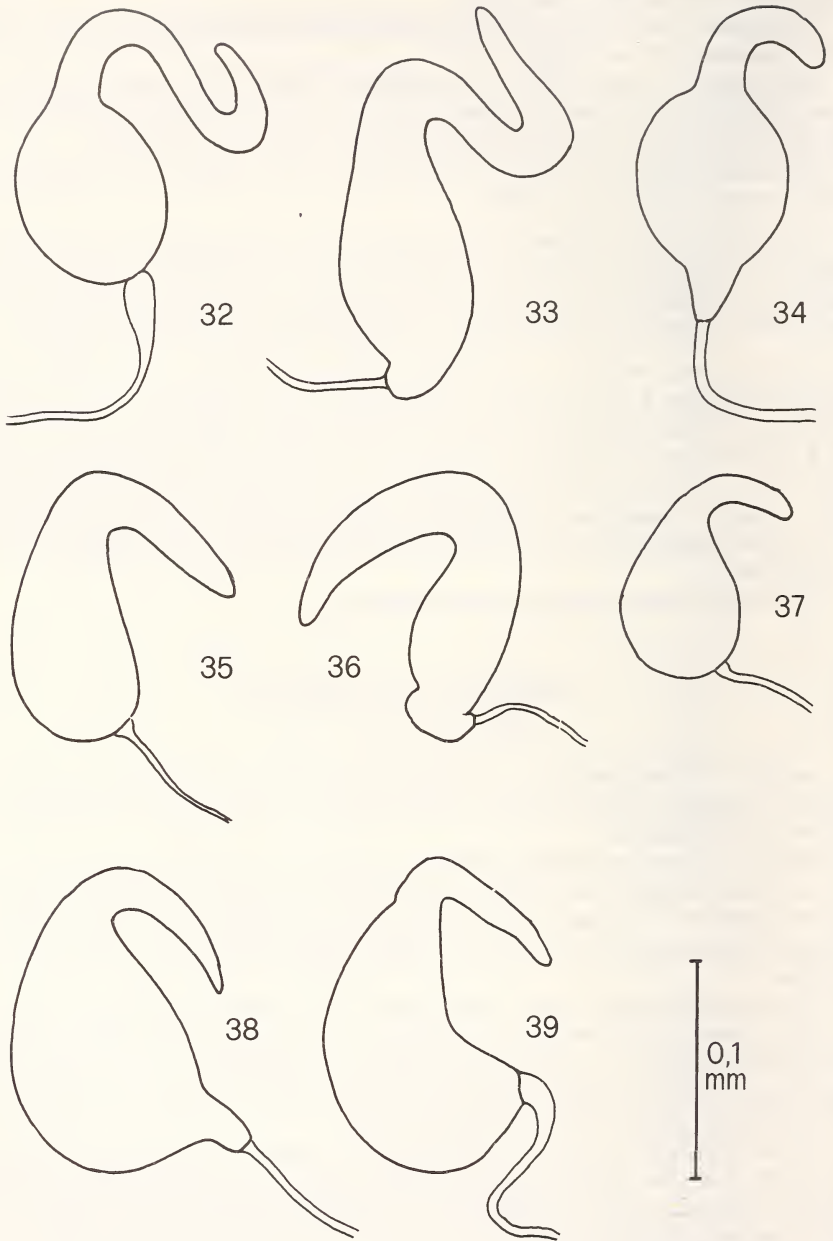
Head: Punctures rather big, impressed, spaced from each other by 2-6 times their own diameter. Clypeal line absent. Anterior-lateral margins distinctly rimmed. 3rd antennal segment 1,7 times as long as the 2nd and longer than 4th + 5th (fig.5); Hamann's organ: gutter with one very small vesicle in both 9th and 10th antennal segments.

Pronotum: Punctures a little smaller and more superficial than on head, spaced from each other by 2-5 times their own diameter. 1,6 times as broad as head, moderately broader than long ($W/L = 1,58$) and moderately convex ($W/H = 1,55$). Anterior margin scarcely bent (fig. 13). Lateral outline very much broadly rounded (fig. 18). Holotype: length 0,90 mm, width 1,43 mm, height 0,92 mm.

Elytra: Punctures as big as on pronotum but sparser, spaced from each other by 3-10 times their own diameter; some smaller punctures are interposed. As broad as pronotum, nearly as broad as long ($W/L = 1,1$) and moderately convex ($W/H = 1,51$). Lateral outline with slight humeral angle. Sutural striae absent. Holotype: length 1,30 mm, width 1,44 mm, height 0,95 mm.

Metathoracic wings present. Meso and metasternum: median carina clear, lateral lines absent, femoral lines incomplete.

Legs: Male hind femora with slight subdistal tooth at the posterior margin (fig. 24). Tarsal formula: ♂ 5-5-4, ♀ unknown.



FIGS 32-39.

Spermatheca of: 32, *A. breve* Ang. & Dmz.; 33, *A. abominabile* Ang. & Dmz.;
 34, *A. anophthalmicum* n. sp.; 35, *A. indra* n. sp.; 36, *A. transversum* Ang. & Dmz.;
 37, *A. harmandi* Port.; 38, *A. khasicum* n. sp.; 39, *A. sevokense* n. sp.

Male copulatory organ (figs 42-43): Aedeagus comparatively robust, with spiral-like proximal part, apex truncate and enlarged; ventral piece bifid. Parameres slender, abruptly tapered near their own base, rounded at apex.

Discussion: *A. varuna* n. sp. is close to *A. lebongense* Ang. & Dmz. and *A. madurensis* Port. by rimmed head, colouring of antennae and habitus; from *A. lebongense* it differs by absence of lateral lines on mesosternum and by lateral outline of pronotum; from *A. madurensis* it is separable only on the basis of aedeagus shape (bending of apex).

Types: INDIA, Darjeeling, between Algarah and Labha, 7 km from Algarah, southern versant, 1900 m, 11.X.1978, Besuchet and Löbl, holotype ♂ N. 3433 in GM.
Distribution: India (Darjeeling).

Agathidium (*s. str.*) *semirufum* Ang. & Dmz.

Agathidium (*s. str.*) *semirufum* Angelini & De Marzo 1981, *Entomol. Basiliensia* 6: 252.

Agathidium (*s. str.*) *semirufum*: ANGELINI & DE MARZO, 1984, *Annl. Hist. nat. Mus. natn. hung.*, 76 in press.

Agathidium (*s. str.*) *semirufum*: ANGELINI & DE MARZO 1983b, *Entomol. Basiliensia* 8:162.

Material: INDIA, Darjeeling, Mahanadi near Kurseong, southern versant, 1200 m, 6.X.1978, 17 specimens in GM and AC; same collecting data, 18.X.1978, 4 specimens in GM and AC; Darjeeling, between Algarah and Labha, 7 km from Algarah, southern versant, 1900 m, 11.X.1978, 2 specimens in GM; Darjeeling, 13 km north from Ghoom, road to Bijanbari, 1500 m, 15.X.1978, 13 specimens in GM and AC; Darjeeling, between Kalimpong and Algarah, 1400 m, 8.X.1978, 7 specimens in GM and AC.

Distribution: Nepal, Bhutan, India (Darjeeling and Assam).

Agathidium (*s. str.*) *laticorne* Port.

Agathidium (*Cyphocele*) *laticorne* Portevin 1922, *Bull. Mus. natn. Hist. nat. Paris* 28: 58.

Agathidium (*Cyphocele*) *laticorne*: PORTEVIN 1928, *Treubia*, 10: 32.

Agathidium (*s. str.*) *laticorne*: HLISNIKOVSKY 1964, *Acta ent. Mus. nat. Pragae*, suppl. 5: 200.

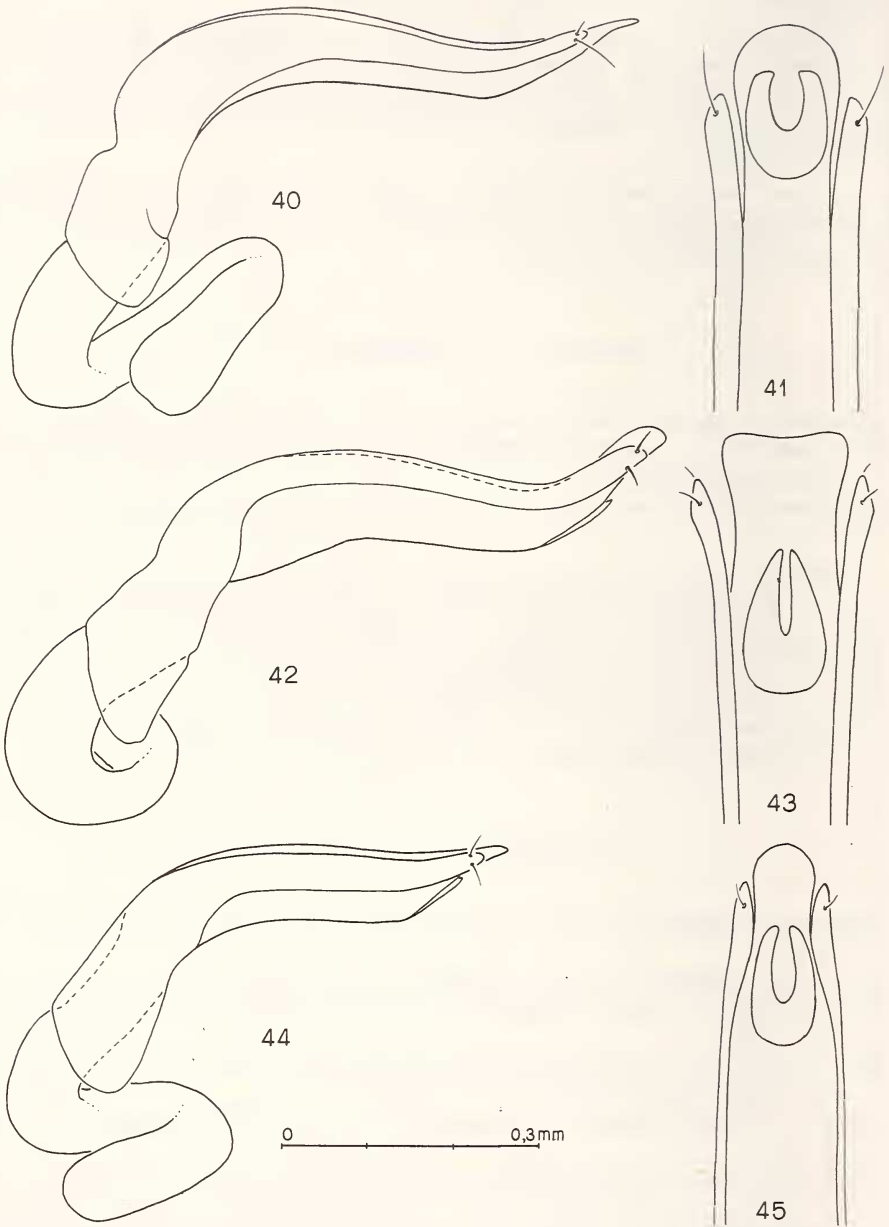
Agathidium (*s. str.*) *laticorne*: ANGELINI & DE MARZO, 1984, *Annl. Hist. nat. Mus. natn. hung.*, 76 in press.

Agathidium (*s. str.*) *laticorne*: ANGELINI & DE MARZO 1983 b. *Entomol. Basiliensia* 8:162.

Agathidium (*s. str.*) *ceylanicum* Hlisnikovsky 1972, *Mitt. schweiz ent. Ges.*, 45: 131.

Material: INDIA, Darjeeling, Teesta, 3 km over the country, 2500 m, 10.X.1978, 2 specimens in GM and AC; Darjeeling, Singla, 300 m, 17.X.1978, 2 specimens in GM and AC.

Distribution: Nepal, Bhutan, India (Garhwal, Darjeeling, Assam and Orissa), Sri Lanka, Indonesia. New record from Darjeeling.



Figs 40-45.

Male copulatory organ (lateral view and ventral view of the apex) of:
 40-41, *A. khasicum* n. sp.; 42-43, *A. varuna* n. sp.; 44-45, *A. sevokense* n. sp.

Agathidium (*s. str.*) **sevokense** n. sp.

Figs 6, 12, 19, 25, 39, 44, 45

Length 2,7-3,25 mm (holotype ♂: 2,7 mm). Dorsum uniformly reddish-brown; venter reddish-brown; antennae testaceous with dark club; legs testaceous. Microreticulation absent. Whole dorsum clearly punctate. A short longitudinal groove at each side of clypeus.

Head: Punctures big and impressed, spaced from each other by 1-4 times their own diameter. Clypeal line absent. Anterior-lateral margins distinctly rimmed. A dimple and a short groove at each side of clypeus. 3rd antennal segment 1,4 times as long as the 2nd and as long as 4th + 5th (fig. 6); Hamann's organ: gutter with one vesicle in both 9th and 10th antennal segments.

Pronotum: Punctures a little bigger and more impressed than on head, spaced from each other by 2-6 times their own diameter. 1,7 times as broad as head, moderately broader than long ($W/L = 1,55$) and moderately convex ($W/H = 1,59$). Anterior margin scarcely bent (fig. 12). Lateral outline very much broadly rounded (fig. 19). Holotype: length 0,90 mm, width 1,40 mm, height 0,88 mm.

Elytra: Punctures a little bigger but less impressed than on pronotum, spaced from each other by 2-8 times their own diameter. A little broader than pronotum, nearly as broad as long ($W/L = 1,13$) and moderately convex ($W/H = 1,72$). Lateral outline with slight humeral angle. Sutural striae absent. Holotype: length 1,30 mm, width 1,47 mm, height 0,85 mm.

Metathoracic wings present. Meso and metasternum: median carina present, lateral lines incomplete, femoral lines incomplete.

Legs: Male hind femora simple (fig. 25). Tarsal formula: ♂ 5-5-4, ♀ 5-4-4.

Male copulatory organ (figs 44-45): Aedeagus comparatively robust, with spiral-like proximal part, lateral margins sinuate and approached into a broadly rounded apex; ventral piece U-shaped. Parameres abruptly tapered near their own base, with rounded apex.

Spermatheca (fig. 39): Basal part pear-shaped, apical part slender.

Discussion: *A. sevokense* n. sp. is very similar to *A. angelinii* Cooter and *A. duofoveatum* Ang. & Dmz. in habitus, colouring, length ratio of antennal segments, meso and metasternum characters and shape of male hind femura. It is separable by bigger size and resolutely by aedeagus shape.

Types: INDIA, Darjeeling, Sevoke, 200 m, 7.X.1978, Besuchet and Löbl, holotype ♂ N. 3444 in GM, 1 ♀ paratype N. 3445 in AC.

Distribution: India (Darjeeling).

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